INTERIM REPORT NO. 11

A CALL TO ACTION:

CITY OF SAN DIEGO MUST PREPARE

ITS INFRASTRUCTURE TO WITHSTAND

ANTICIPATED IMPACTS FROM GLOBAL WARMING

REPORT OF THE

SAN DIEGO CITY ATTORNEY

MICHAEL J. AGUIRRE

OFFICE OF
THE CITY ATTORNEY
CITY OF SAN DIEGO

1200 THIRD AVENUE, SUITE 1620
SAN DIEGO, CALIFORNIA 92101-4178
TELEPHONE: (619) 236-6220

31 AUGUST 2006

Table of Contents

I. AN INTRODUCTION TO CLIMATE CHANGE

This Interim Report was assembled from a variety of other reports which address and identify, at various levels, the different causes and effects of global warming, including several thorough studies completed by the state of California this year.[1]

Global climate change presents one of the foremost threats to San Diegans and California--economically, socially and environmentally. Increases in the concentration of greenhouse gases (GHGs) in the atmosphere are expected to result in substantially higher temperatures, more frequent intense storms, rising sea levels, and changes in water flows and quality. There is broad agreement in the scientific community that human activities are contributing to these changes, largely by releasing carbon dioxide into the atmosphere through burning fossil fuels to generate electricity, manufacture goods, heat our homes, and power our vehicles.[2]

In June of 2005, the United Nations World Environment Day took place in San Francisco, California. At this international call to action, Governor Arnold Schwarzenegger pledged the following commitment:

> As of today California is going to be the leader in the fight against global warming....I say the debate is over. We know the science. We see the threat. And we know the time for action is now.[3]

A. The City Attorney's Commitment

The City Attorney is committing today to make it a top priority to identify existing laws at the local, state and federal level which empower the City to seek legal remedies through the judicial system against causes of global warming. The City Attorney will ensure that the City is continually apprised of changes in state and federal statutes, developments in the courts, regulatory changes, and other legal developments that empower the City to combat global warming. We will:

- Identify current municipal code provisions which aid in the fight against the causes and effects of climate change. (e.g., San Diego Municipal Code sections 42.0801, 42.0901, 43.0301, 54.0201, 54.1001, and 121.0302 et seq.).

- Identify current state and federal air quality laws within the City's jurisdiction and authority. (e.g., 42 U.S.C. section 7604 et seq. and California Health & Safety Code section 42400 et seq.).

- Identify global warming public nuisances. (e.g., California Code of Civil Procedure Section 731, Business & Professions Code Section 17200 et seq., and San Diego Municipal Code Section 12.0202).

- Determine the appropriateness of joining civil lawsuits to combat the causes and effects of global warming.

- Identify where we can work with other enforcement agencies to develop multi-agency investigation and enforcement efforts to address the causes and effects of global warming head-on.

- Establish working relationships with other cities, the state of California, and others nationwide to investigate and determine the appropriateness of legal action and other enforcement action to address the causes and effects of global warming.

- Establish working relationships with private law firms and non-profit organizations to determine the appropriateness of seeking legal action that addresses the causes and effects of global warming.

- Address climate change through the legal review of CEQA and NEPA documents, and where appropriate, consider bringing legal action challenging the adequacy of other non-City CEQA and NEPA documents based upon these and other issues.

- Review City planning, zoning and other regulatory provisions and documents to evaluate whether global warming issues can be addressed within the scope of existing laws.

- Support the development and implementation of City policies, plans, ordinances and other actions geared toward remedying and managing the global warming problem, including expedited legal review of draft policies, plans, ordinances, regulations, and resolutions.

B. Greenhouse Science In a Nutshell

With atmospheric concentration of greenhouse gases increasing, it is the broad scientific consensus that this is leading to significant changes in the global climate.[4]

It's not that people don't need greenhouse gases. Without them, the Earth would be permanently icy and inhospitable. Instead, water vapor and GHGs in the Earth's atmosphere absorb infrared energy radiating from the sunlight-warmed surface of the Earth. GHGs allow the Earth's atmosphere to function as a sort of thermostat, keeping temperatures on Earth within a broad, mostly habitable range. However, increasing the atmospheric concentration of these energy-absorbing gases at our current rate threatens to disrupt the global climate, substantially altering temperature and precipitation patterns. We, as a people, are contributing to this change and the rate of change.[5]

Of greatest concern are these gases: carbon dioxide, methane, nitrous oxide, and halocarbons. Carbon dioxide is the result of burning gasoline, natural gas, coal, and oil, and it is the largest contributor to the greenhouse effect, with emissions estimated to be 82 percent of all U.S. GHG emissions.[6] Methane emissions are the result of decomposing landfill waste, manure and fermentation from livestock, and natural gas systems. Methane emissions account for just under 10 percent of U.S. emissions.

Nitrous oxide emissions--six percent of total U.S. GHG emissions--come from agricultural soil management and combustion engines. Halocarbons (including

chlorofluoro-carbons, hydrochlorofluorocarbons, and perfluorocarbons) are typically produced during industrial processes.[7]

Emissions of sulfate aerosols (microscopic airborne particles) from industrial processes complicate things further. These aerosols have a cooling effect on the atmosphere because they tend to reflect sunlight before it reaches the Earth. In a few parts of the world, in fact, the cooling effect of aerosols has more than offset the warming influence of GHGs.[8] Aerosols remain in the atmosphere for a much shorter time than GHGs, however, and the long-term cooling impact of aerosols is small compared to the warming effect of GHGs. Including these aerosols in climate models has greatly improved the models' ability to reproduce observed changes in global temperatures.[9]

In addition to all of the above, changing patterns of land use and land cover are contributing to the alteration of the atmospheric balance. With the destruction of forest and green areas to accommodate urban development, we are losing valuable resources known as "sinks" that naturally absorb GHGs from the atmosphere.[10] So, as one can see, climate change is a complicated matter involving many layers of interaction, action and inaction.

C. A Warmer Earth, a Change in Quality of Life

Globally, elevated levels of GHGs have already caused the increase, and are expected to continue to cause increases in temperatures, sea levels, and the number and severity of heat waves, floods, droughts, and other extreme weather events.[11]

Impacts of Climate Change[12]

Water resources. Changes in the location, time of year, and form in which precipitation falls can alter the reliability and quality of water supplies.

Human health. Although warmer temperatures are expected to lead to a decrease in cold-related illnesses, scientists expect a net increase in human mortality due to higher temperatures, urban air pollution problems, an increase in extreme weather incidents, and changing regional disease patterns.

Agricultural production. Changes in temperature, precipitation, and soil moisture will affect the distribution and productivity of crops and increase the prevalence of disease and pests. Initial studies suggest that global food production can be maintained, though regional impacts will vary widely.[13]

Coastal systems. A rise in sea level would severely disrupt people living in coastal areas, as well as the plants and animals of coastal ecosystems. Increasingly, people are taking up residence in coastal areas, which will result in more coastal residents becoming vulnerable to the effects of the rise in sea level, beach erosion, severe weather, and other coastal issues associated with climate change. Many low-lying and island countries face potentially catastrophic storm surges and tidal flooding.

Ecosystems. Climate change may affect where individual ecological systems can thrive, the mix of species the ecosystems include, and the ability of ecosystems to provide the vast range of benefits that enable human societies to survive.[14]

D. Why It's Important to San Diego

While climate change is a global problem, it has regional and local causes and impacts. At a regional level, probable impacts in southern California include warmer temperatures, shrinking beaches, increased energy usage due to air conditioning usage, compromised water supplies (which means that San Diego will be affected even by changes in other regions, because of its reliance on imported water), and increased risk of wildfires. At moderate elevations, higher temperatures are expected to lead to an increase in winter rainfall and decrease in snow. In turn, this results in higher levels of winter runoff, increasing the likelihood of flooding. In the summer, expected lower levels of rainfall--coupled with reliance on runoff from a diminished snowpack--increase the likelihood and severity of drought, reducing the volume of water available for competing human, agricultural, and wildlife needs. Finally, coastal areas can expect a higher risk of flooding and increases in coastal erosion. These can be extremely destructive to both human and natural communities, and will negatively impact San Diego's economic bases of tourism and agriculture.

1. San Diego's Changing Temperature

In California, the higher temperatures attributed to global warming will result in more frequent and longer periods of drought.[15] Already, San Diego is experiencing extremely warm temperatures, resulting in record highs for statewide electricity demand.[16] On July 25, 2006, the previous record for electricity usage was broken when the statewide system exceeded 50,000 megawatts of power.[17] The previous record was set on July 20, 2005 at 45, 431 megawatts.[18] The local implications of climate change are well documented. The average temperature has already increased by 2 degrees over the past 100 years while the amount of rainfall and precipitation has decreased by 10-25 percent.[19] Importantly, the number of days exceeding 100 degrees has been, and is predicted to continue to increase.[20]

While it is difficult to precisely predict the effects of global climate change at the local level, we do know that the types of risk that we face are widely varied. Even a three degree increase in average temperatures could almost double the heat related deaths in southern California.[21] By the year 2100, California temperatures are predicted to increase another 2-9 degrees Fahrenheit, which would cause increased heat waves and ground level ozone. Human health effects of ozone include asthma and respiratory disease.[22]

2. San Diego's Water Supply

The majority of California's population of about 37 million people is concentrated in or near major urban centers. About half of the State's population resides in southern California where annual precipitation and runoff is much less than in northern California.

Much of the State's agriculture also is in areas with limited precipitation, including the San Joaquin Valley and the Imperial Valley. Agriculture is critical to the State's economy and usually consumes about 40 percent of the State's total annual developed water supply. California uses this water to produce more than 350 crops, which in 2003

were valued at $29.4 billion. California produces more than half of the vegetables, nuts, and fruits produced in the U.S. An extensive network of reservoirs and aqueducts has been developed throughout much of California to provide water to major urban and agricultural areas. This network serves to store and transport runoff from where it is plentiful to where it is scarce. It also serves to store winter and early spring runoff so that it will be available when water demand is the highest in the late spring and summer.

Major water storage and conveyance systems in California include the All-American Canal and the Colorado River Aqueduct, both of which divert water from the Colorado River to southern California. In the recent past, California has diverted as much as 5.3 million acre-feet of water annually from the Colorado River. This is in excess of the State's allotment of 4.4 million acre-feet.[23]

The increased average temperatures would affect the precipitation patterns in the region. Precipitation will increase by 10-50 percent in fall, winter, and spring, with the largest increases occurring in winter. However, the result of increased rain and snow in the winter will be followed by earlier spring run-off and excessively dry summers. In essence, there will be more precipitation at the times it is not needed and less when it is needed, thus taxing California's water supply, which largely comes from exported sources and is already strained.[24] Lack of water resources and changed weather patterns will have a negative impact on the agricultural sector of the economy.

The 2005 California Water Plan Update estimates that water use efficiency can reduce annual urban water use by 1.1 million to 2.3 million acre-feet by 2030. It is also estimated that water use efficiency can reduce annual agricultural water use by 0.5 million to 2.0 million acre-feet by 2030. Accelerating efforts to attain those water use reductions by 2015 could result in a cumulative reduction of GHG emissions of approximately 30 million tons by 2030. The Department of Water Resources is developing water use efficiency measures that can help California meet the GHG emission reduction goals established by the Governor. These measures are described in a Department staff report titled "Reduction of Greenhouse Gas Emissions through Water Use Efficiency Measures, October, 2005."[25]

3. San Diego's Rise in Sea Level

The California coast is currently experiencing a rise in sea level. In Los Angeles, San Francisco and San Diego the sea level has risen 3, 5, and 8 inches respectively in the last century. With climate change, it is predicted that the next century could see an additional 13-19 inches of sea level increase. This may lead to flooding, drinking water contamination, beach erosion, and loss of wetlands and salt marshes. [26] San Diego is a world renowned tourist destination and relies heavily on beach ecosystems for its economy. As the tourism industry requires environmental health, this major industry will be severely impacted by climate change.

Future sea level rise, while projected to be a relatively slow and gradual process, presents a somewhat alarming prospect for Southern California, especially in the case of the more extreme projections. The effects of sea level rise may include:

- Increased erosion of beaches, bluffs and other coastal features.
- Inundation of coastal land and marshes.
- Local flooding near the mouths of rivers and streams due to backwater effects (especially on coastal plains).
- Increased potential for sea water intrusion into coastal aquifers.

II. MAKING A DIFFERENCE TODAY

A. What is the International Community Doing?

1. Law Change

The primary international effort to combat climate change is the 1997 "Kyoto Protocol." This is a binding agreement made under the United Nations Framework Convention on Climate Change. Countries that ratify this protocol commit to reduce their emissions of carbon dioxide and five other GHGs, or engage in emissions trading if they maintain or increase emissions of these gases. On February 16, 2005, the Kyoto Protocol took effect in the 141 countries that ratified it.[27]

As of July 2006, 164 countries have joined – although the United States is not a signatory. This lack of aggressive action by Washington, D.C. has spurred state and local governments throughout the nation to take a proactive approach and adopt their own policies and initiate litigation aimed at reducing GHGs.

2. Policy Change and Coalition Building

a. Clinton's City Coalition to Address Global Warming

In August 2006, twenty-two of the world's largest cities announced they will work together to limit their contributions to climate change in an effort led by former president Bill Clinton and the Clinton Foundation. Among its members are the cities of Chicago, Los Angeles, Philadelphia, New York, Cairo, Delhi, London and Mexico City. The goals of the initiative are to create an international consortium to bargain for cheaper energy-efficient products and communicate ideas on reducing GHGs. Clinton plans on targeting the 40 cities that account for 15 to 20 percent of the world's GHG emissions.[28]

b. ICLEI Climate Protection Campaign

The International Council for Local Environmental Initiatives (ICLEI) is an international association of local governments and national and regional governmental organizations that have made a commitment to sustainable development. More than 475 cities, towns, counties, and their associations worldwide comprise ICLEI's growing membership. ICLEI works to achieve sustainable development through international performance-based, results-oriented campaigns and programs. 188 cities across the United States, including 39 California cities, are identified as ICLEI Climate Protection Campaign

Participants. The City of San Diego, along with the City of Chula Vista, the City of Irvine, the City of Los Angeles, and the City of Sacramento, are among the cities identified as Climate Protection Campaign Participants.[29]

B. What's Happening Nationwide?

1. The Power of the Courts

Nationwide, cities, states and non-profits are joining forces to combat climate change by filing lawsuits challenging the lack of action in Washington, D.C. and the emissions-related activities of industry. Here are a few examples.

- Environmental groups and four cities sued two federal agencies for violating NEPA by providing financial assistance to fossil fuel projects (oil and gas fields), transportation projects (pipelines), and the processing and refining facilities and power plants responsible for the emission of billions of tons of GHGs.[30] The court has recently ruled that the cities have standing to sue--a legal concept meaning that the potential injury to them is sufficiently likely to allow them to pursue a suit.

- Eight states, including California, and the City of New York sued five power companies, alleging that climate change is a public nuisance that threatens California with widespread harm, and that the companies contributed to the nuisance as the nation's largest emitters of carbon dioxide pollution.[31]

- Environmental groups sued the federal government for failure to take any action on the groups' petition to list the polar bear as a threatened species under the Endangered Species Act. The plaintiffs allege that the polar bear is threatened because GHG emissions are causing ocean temperatures to rise, melting sea ice, which polar bears require for survival.[32]

- Twelve states, several cities, and over a dozen environmental groups challenged the U.S. Environmental Protection Agency's (U.S. EPA) decision not to set standards for air pollutants by motor vehicles. The United States Supreme Court granted certiorari in part to determine whether the U.S. EPA Administrator has authority to regulate climate change gases under section 202(a)(1) of the Clean Air Act.[33]

- Twelve states and cities and three environmental groups brought legal action arguing that the U.S. EPA has authority under the Clean Air Act to regulate carbon dioxide from power plants.[34]

- Environmental groups filed a California Environmental Quality Act (CEQA) case alleging that the Reclamation Board of the Resources Agency of California failed to consider data which indicate the "anticipated impacts of climate change in the Sacramento-San Joaquin Delta will significantly affect both the severity of impacts associated with and the efficacy of the project's proposed flood control

alternatives" before approving discretionary permits to build 224 luxury homes on top of a 300-foot-wide "superlevee" on Stewart Tract, an island in the Delta.[35]

- Environmental groups sued the Owens Corning Corporation, alleging that a foam insulation manufacturing plant violated the Clean Air Act and the State of Oregon's State Implementation Plan. The resulting settlement agreement prohibited Owens Corning from ever using "ozone depleting blowing agents" in the state of Oregon.[36]

- Environmental groups sued fourteen federal agencies for their failure to implement the federal Energy Policy Act by not purchasing the legally required percentages of Alternative Fuel Vehicles for their vehicle fleets.[37]

2. Coalition Building

In addition, many cities across the country are joining coalitions formed to collaborate on and apply consensus-based agendas and goals aimed at reducing the impacts of climate change.

a. U.S. Mayors' Climate Protection Agreement

In addition to the efforts of the Clinton Foundation and the ICLEI, as discussed above, California cities are also participating in coalitions like the U.S. Mayors' Climate Protection Agreement which was unanimously approved and passed by the U.S. Conference of Mayors on June 13, 2005. Nearly 300 Mayors have signed this agreement, pledging that their cities will reduce GHG emissions. Fifty-four California Mayors are currently participating, including the Mayors of Arcata, Burbank, Del Mar, Irvine, Los Angeles, Long Beach, Pleasanton, Sacramento, San Jose, Santa Barbara, Santa Monica, Stockton, Thousand Oaks, Vallejo and West Hollywood.[38]

Under the U.S. Mayors Climate Protection Agreement, participating cities commit to take the following three actions:[39]

- Strive to meet or beat the Kyoto Protocol targets in their own communities, through actions ranging from anti-sprawl land-use policies to urban forest restoration projects to public information campaigns.

- Urge their state governments, and the federal government, to enact policies and programs to meet or beat the GHG emission reduction target suggested for the United States in the Kyoto Protocol--7 percent reduction from 1990 levels by 2012.

- Urge the U.S. Congress to pass the bipartisan GHG reduction legislation, which would establish a national emission trading system.

3. Policy Change

States are individually developing State Global Warming Action Plans. As of May 2004, 28 states and Puerto Rico have voluntarily completed state action plans to reduce the effects of climate change.[40]

Cities across the United States are adopting their own local action plans (LAPs) to reduce carbon dioxide emissions. For example, in 1993, the City of Portland in partnership with the County of Multnomah, became the first U.S. City to adopt a LAP. Since then, hundreds of municipal governments worldwide have joined Portland and implemented their own global warming mitigation plans. Because of its groundbreaking work in this area, including a June 2005 report documenting its progress in reducing emissions 10 percent from 1990 levels by 2010, Portland's LAP serves as an example to other local governments and is attached as Appendix A.[41]

C. What is the State of California Doing?

California is the world's twelfth largest emitter of greenhouse gases.[42] Since 2000, the state of California has undertaken a number of actions to confront climate change, including litigation, changes in the law, changes in policy and major efforts to study analytically and scientifically the impacts of global warming and the means available to manage these impacts. On August 30, 2006, the Governor and Legislative leaders in California announced agreement on Assembly Bill 32, which would move California toward even greater action on global warming. This new law, if signed by the Governor, would lead to regulations gradually rolling back CO2 emissions, by the year 2020, to 25% below their 1990 levels.[43]

1. The Power of the Courts

The State of California has initiated and joined several lawsuits to combat the causes and effects of climate change, including lawsuits against the U.S. EPA seeking to require regulation of carbon dioxide emissions, and a lawsuit against five major power companies, seeking reductions in GHG emissions.[44]

2. Law Change

a. Million Solar Roofs Plan

Just this month, the Governor signed SB 1, an initiative program to expand solar power through the "Million Solar Roofs" plan.[45]

b. Executive Order S-3-05

As recent as June 2005, Governor Schwarzenegger signed Executive Order S-3-05 establishing the following state goals for reducing GHG emissions:

- By 2010, reduce emissions to the 2000 level.

- By 2020, reduce emissions to the 1990 level.
- By 2050 reduce emissions to 80 percent below 1990 emissions.

These goals were based upon these specific Executive findings as expressed in Governor Schwarzenegger's Executive Order:

> California is particularly vulnerable to the impacts of climate change.
>
> Increased temperatures threaten to greatly reduce the Sierra snowpack, one of the State's primary sources of water.
>
> Increased temperatures also threaten to further exacerbate California's air quality problems and adversely impact human health by increasing heat stress and related deaths, the incidence of infectious disease, and the risk of asthma, respiratory and other health problems.
>
> Rising sea levels threaten California's 1,100 miles of valuable coastal real estate and natural habitats.
>
> The combined effects of an increase in temperatures and diminished water supply and quality threaten to alter micro-climates within the state, affect the abundance and distribution of pests and pathogens, and result in variations in crop quality and yield.
>
> Mitigation efforts will be necessary to reduce GHG emissions and adaptation efforts will be necessary to prepare Californians for the consequences of climate change.

This Executive Order requires the California EPA (Cal/EPA) to report biannually on progress reached toward achieving these goals, with discussion of these impact climate change areas:

- Impact to Water Supply
- Impact to Public Health
- Impact to Agriculture
- Impact to California Coastline
- Impact to Forestry

Within the last year, many cities, including Chula Vista, Huntington Park, Pico Rivera, Port Heuneme and San Bernardino, have passed resolutions in support of the Governor's greenhouse gas emissions targets.

Other law changes include the following:[46]

In 2006

- The CPUC approved a plan to provide $2 billion in consumer rebates and other efficiency incentives over the next three years. Under this program, consumers

who purchase energy efficient appliances like air conditioners, clothes washers, furnaces and water heaters will be eligible for rebates ranging from $35 to more than $600. Visit www.flexyourpower.org for more details.[47]

In 2005

- **AB 1007** directs the CEC, in partnership with the CARB, to develop and adopt a state plan to increase the use of alternative transportation fuels including a full fuel-cycle assessment of emissions of GHGs for the use of alternative fuels.

- **AB 2628** allows California owners of new hybrid electric cars and recent-model low-emission vehicles to use the HOV (high-occupancy vehicle) lanes normally reserved for carpools. The law opens those lanes to low-emissions vehicles produced during the 2004 model year or earlier, as well as new low-emission hybrid-electric vehicles that achieve at least 45 miles per gallon. The law limits the total number of HOV stickers for these vehicles to 75,000 and sets procedures to avoid congestion on the HOV lanes.[48]

- **AB 1684** expands the state's self-generation incentive program to include projects fueled with waste gas.

- **SB 1565** requires the State Energy Resources Conservation and Development Commission to develop a strategic plan including renewable energy.

- **AB 2473** strengthens an existing law that prohibits local governments from placing restrictions on solar energy systems.[49]

- **AB 594** requires Pacific Gas and Electric Company to establish a net metering agreement with the city and county of San Francisco for up to 5 megawatts of solar power. San Francisco currently owns a 688-kilowatt solar power system at the Moscone Convention Center and plans to install a 600-kilowatt system at a wastewater treatment plant.[50]

In 2004

- Governor Schwarzenegger issued **Executive Order S-7-04** outlining his vision for the *California Hydrogen Highway Network.*

- Governor Schwarzenegger signed **Executive Order S-7-04** designating California's 21 interstate freeways as the "California Hydrogen Highway Network" and directing Cal/EPA, in concert with the State Legislature, to develop the California Hydrogen Economy Blueprint Plan (Blueprint Plan) for the rapid transition to a hydrogen economy.

- Governor Schwarzenegger signed **Executive Order S-20-04** establishing California's priority for energy and resource-efficient high performance buildings, setting a goal of reducing energy use in state-owned buildings by 20 percent by 2015 (from a 2003 baseline) and encouraging the private commercial sector to do the same.

- The CARB adopted **regulations** to reduce GHG emissions from new motor vehicles, pursuant to AB 1493. The standards, which phase in beginning in 2009, will achieve reductions of 22 percent in 2012 and 30 percent in 2016 as compared to a model year 2002 average vehicle.

- The CPUC ordered investor owner utilities to describe their GHG emissions profile, actions taken to mitigate GHG emissions, and position on the optimal policy response to the threat of climate change.

- The CPUC required investor owned utilities to use a carbon adder in evaluating procurement bids to reflect the financial risk of future carbon regulation

In 2003

- The CARB modified its **regulations,** first adopted in 1990, on zero emission vehicles. These regulations require manufacturers to offer for sale in California specified numbers of zero and near-zero emitting vehicles. Emerging technologies, such as battery electric, fuel cell and hybrid electric vehicles, are encouraged.

In 2002

- **AB 1493** directs the CARB to adopt regulations that achieve the maximum feasible and cost effective reduction of GHG emissions from passenger cars and light trucks sold in California. No other state or nation had previously adopted legislation specifically intended to cut motor vehicle pollution that causes climate change.[51]

- **SB 812** directs the California Climate Action Registry to include forest management practices as a mechanism to achieve emission reductions and top adopt procedures and protocols for reporting and certification of GHG emission reductions.

- **SB 1078** establishes the *California Renewable Portfolio Standard Program.*

- **SB 1389** directs the CEC to adopt an *Integrated Energy Policy Report* every two years.

- **AB 857** directs the Governor to prepare a comprehensive *State Environmental Goals and Policy Report.*

In 2001

- **SB 527** amends the California Health and Safety Code to authorize the CARB to issue administrative penalties for certain violations of air pollution laws and clarifies SB 1771. Specifically, this new law allows the CARB to impose administrative penalties, in lieu of civil penalties, for violations of regulations relating to vehicular and non-vehicular air pollution control. This law does not alter the Health and Safety Code provisions relating to the authority of Air Districts to seek civil and administrative penalties.

- **SB 1170** requires the CEC, the CARB and the Department of General Services, to develop and adopt fuel-efficiency specifications for state motor vehicles and replacement tires to mitigate public health and environmental problems, including climate change.

3. Policy Change

The Climate Action Team and Cal/EPA developed a Report for Governor Schwarzenegger and the Legislature in March of 2006. The Report contains strategies to meet the Governor's GHG emissions targets and includes analysis of market based options and fee based options. Also among the strategies discussed are mandatory reporting of GHG emissions.

Other policy developments have included the following:[52]

In 2005

- Governor Schwarzenegger adopts GHG reduction targets for the state and establishes the Climate Action Team.
- The CEC adopts its 2005 Integrated Energy Policy Report.
- The CPUC and CEC adopt the Energy Action Plan II recommending accelerating the state Renewable Portfolio Standard to 20 percent by 2010 and to 33 percent by 2020.

In 2004

- CalTrans issues a draft *California Transportation Plan.*
- Governor Schwarzenegger issues Executive Order S-7-04 outlining his vision for the *California Hydrogen Highway Network.*
- Draft action plans are released for five project topics in the West Coast Governor's Global Warming Initiative resulting in a commitment to adopt common motor vehicle and appliance efficiency standards.

In 2003

- The CEC, CPUC, and the California Power Authority issue *The Energy Action Plan for the State of California* identifying energy efficiency and demand response as the state's preferred energy resource and accelerates the 20 percent renewable resource goal from 2017 to 2010.
- The California Office of Planning and Research (OPR) issues Governor Schwarzenegger's Environmental Goals and Policy Report.
- The CEC's Public Interest Energy Research Program (PIER) creates the *California Climate Change Research Center.*
- The CEC adopts Building Efficiency standards.

- The CEC issues the PIER reports entitled, *Global Climate Change and California: Potential Implications for Ecosystems, Health and the economy; Climate Change Research, Development and Demonstration Plan*.

In 2002

- The CEC adopts Appliance Efficiency standards.
- California's Climate Action Registry is launched.

D. What are other California Cities Doing?

Many California cities are joining forces with the state of California and with other cities nationwide. For example:

1. The Power of the Courts[53]

The Cities of Boulder, Oakland, Arcata, and Santa Monica, with other interested parties, joined in a National Environmental Policy Act (NEPA) lawsuit against the federal government for providing financial assistance to projects that will result in emissions of GHGs without studying the environmental effects of doing so.

2. Policy Change

Like efforts at the state level, many California cities are electing to develop their own Local Action Plans (LAPs) to confront global warming. Although different, these Action Plans are similar in intent to what the City of Portland developed back in 1993. The Cities of Los Angeles, Santa Rosa and San Francisco are but a few examples of cities who have developed Local Action Plans.

a. Los Angeles[54]

In 1997, the City Council of Los Angeles adopted a resolution in support of the International Council on Local Environmental Initiatives' (ICLEI) Cities for Climate Protection Campaign, which committed Los Angeles to the development of a Climate Action Plan (CAP). Los Angeles' Energy CAP includes a variety of programs including:

- Renewable energy programs that require power plants to use cleaner, renewable energy resources;
- Energy efficiency programs that convert city facilities and street lights to more efficient, lower energy consumption technologies;
- Recycling programs that reduce energy used in the manufacture of goods and reduce the generation of GHGs from the landfills;
- Transportation programs that incorporate clean alternative fuels and electric vehicles (as well as the necessary infrastructure), bicycles for law enforcement

patrols, increased public transit alternatives, adjusted traffic signal timing to improve traffic flow, and expanded employee ridesharing efforts; and,

- Tree planting programs involving youth in the Los Angeles school system that provide shade for buildings which lower energy usage and also acts as a carbon sink, removing carbon from the atmosphere.

The Los Angles Energy CAP benefits heavily outweigh the costs. Studies show that Los Angles will, among other things:

- Avoid any expansion of the city's fleet of vehicles projected by the year 2010,
- Exceed the initial capital cost and save $10 million plus in operating costs by converting the city streetlights to high-pressure sodium or metal halide lamps;
- Prevent about 149,000 tons of carbon dioxide (CO2) per year from entering the atmosphere due to landfill and biosolid gas to energy production while reducing the amount of power bought by the facilities and/or allowing the facilities to sell the energy for a profit;
- Water conservation efforts resulting in minimized need for expensive import of water;
- Tree planting resulting in reduced energy costs on air-conditioning with a return of about $2.73 in savings for every $1.00 invested;
- Upgrades to energy efficient mechanical, electrical, lighting, and water systems resulting in reduced operating expenses over time and a net savings to the city after the projected 10-year pay back period;
- Procurement of fuel efficient vehicle fleets resulting in cumulative savings to the city; and,
- Improved traffic flow due to better signal timing resulting in a savings of 434, 187 tons of CO2 per year.

Los Angeles has implemented monitoring efforts to further study and ensure the effectiveness of its programs.[55]

b. Santa Rosa

In 2001, the Santa Rosa City Council (like Los Angeles) adopted a resolution and became a member of the Cities for Climate Protection as part of the ICLEI project. The Santa Rosa resolution committed the city to conducting an inventory of its GHG emissions, setting a target for the reduction of GHG emissions, creating and implementing an action plan to meet the targets, and to monitor the progress. As of 2001, the inventory of emissions was completed and Santa Rosa is determining the appropriate target for reduction based on viability. In order to meet the targets, Santa Rosa has identified

opportunities including increasing alternative fuel vehicles for city fleets, increasing employee education about recycling and re-use of waste, retrofitting existing buildings with better energy efficient machines and lighting, implementing new green building programs and practices starting with the construction of the new City Hall, converting street lights and traffic signals to Light Emitting Diode (LED) with solar power, using natural lighting in garage facilities, and retrofitting aeration blowers in the water sewer systems to save the city $390,000 a year and avoid 1,172 tons per year of CO2 production alone.[56]

c. San Francisco

In 2004, the city of San Francisco's Department of Environment and Public Utilities Commission staff prepared a Climate Action Plan committing San Francisco to a reduction of GHG emissions to 20 percent below its 1990 levels by 2012. San Francisco's Action Plan focuses on key areas contributing to the reduction in GHG production including transportation, energy efficiency, renewable energy, and solid waste. Specifically, in the transportation category, San Francisco will increase public transit, the use of ridesharing, bicycling and walking, and clean air vehicles while reducing the overall number of vehicular trips discouraging driving. The overall projected reduction in GHG emissions is 963,000 tons per year. San Francisco expects to reduce its emissions by an additional 801,000 tons per year due to increased energy efficiency by increasing incentives and providing installation and technical services in residential, commercial and municipal buildings, expanding education and outreach, and strengthening legislation, codes and standards. Renewable energy is projected to reduce emissions in the amount of about 548,000 tons of carbon dioxide per year with the development of solar, wind, biomass and other emerging renewable energy technologies as well as by supporting green power buying. In the solid waste sector, the city expects to reduce carbon dioxide in the amount of 302,000 tons per year by increasing recycling and composting in residential, commercial and construction areas, supporting collection of recyclables, promoting waste reduction and re-use, and expanding existing municipal programs. The City of San Francisco projects its overall approximate reduction to total 2,614,000 tons of carbon dioxide per year.[57]

3. Building Coalitions

a. The California Climate Action Registry

The California Climate Action Registry (Registry) was created by the State of California to provide businesses, industry, non-profits and local governments an opportunity to demonstrate their environmental leadership, gain competitive advantages by increasing operational efficiency, manage carbon-related risks, protect early action (voluntary emission reductions) and participate in the climate change policy discussion--the dialogue.[58]

Six cities in the state of California are members of the California Climate Action Registry. These include:

- City and County of San Francisco
- City of Los Angeles
- City of Palo Alto
- City of Sacramento
- City of Santa Monica
- City of West Hollywood

b. The Cities for Climate Protection Campaign

Created by the state of California, the Cities for Climate Protection Campaign goal is to reduce GHG emissions resulting from the burning of fossil fuels and other activities. Over 25 California cities have joined this campaign including Los Angeles, Sacramento, San Francisco and Chula Vista.[59]

E. What is the City of San Diego Doing?

1. Renewable Energy

a. Policy

The City Attorney, in partnership with City Departments, has recently been an active participant in several proceedings at the California Public Utilities Commission (CPUC) which will influence the sustainable energy future of the state and region. These proceedings include SDG&E's Long Term Resource Plan proceedings, the Renewable Portfolio Standard, the Distributed Generation proceeding, the Rule 21 proceeding for the interconnection of customer-owned renewable fueled generators to the electric grid, the Demand Response proceeding, the Net Metering proceeding, the Critical Peak Pricing proceeding, the Advanced Meter proceeding, the California Solar Initiative, and others. Throughout these proceedings the City has embraced the California Energy Action Plan (EAP), adopted as state policy by the CPUC and the California Energy Commission, which calls for the state's energy needs to be met through a prioritized list of resources.

The EAP establishes a "loading order" and ranks energy resources in the following order of preference, from highest priority to lowest: (1) Energy Efficiency and conservation; (2) Demand Response; (3) Renewable-fueled generation; (4) Distributed Generation; (5) Transmission; (6) Cleanest Available fossil-fueled generation.

The City has adopted policies consistent with these EAP goals. Council Policy 900-14 is a policy for Sustainable Building Practices for Public and Private Projects. This "Green Building" program requires that projects be certified as "LEED Silver Level" for energy

efficiency. The program also provides incentives for private building owners to install energy efficiencies and renewable resources. Council Policy 900-18 calls for the City to purchase energy efficient products which can reduce energy use by 25-75 percent. The City Council has adopted resolutions calling for the installation of at least 50 megawatts of renewable-fueled electric generation in San Diego by 2013 and for the installation of at least 50 megawatts of energy efficiencies in existing buildings. The City Council has created the Sustainable Energy Advisory Board to marshal and monitor these efforts.

b. Projects

The City has taken concrete steps toward meeting these goals through the implementation of various projects. In the area of energy efficiency, all new City facilities are required to meet the LEED certification mandate of Council Policy 900-14. Through the use of low cost financing from the California Energy Commission, the City has since 2001 been able to retrofit older buildings with energy efficiencies. Together these efficiencies have resulted in the savings of nearly 25,000,000 kilowatt hours per year of electricity not used. The savings from the avoided cost of this avoided electric use sustains the financing of the improvements. The energy efficiencies retrofits have been performed in all types of City facilities including libraries, police stations, fire stations, pump stations, and office buildings, among others.

In the area of renewable-fueled generation, the City either owns or has entered partnerships with private entities for the development of more that 20 megawatts of distributed generating capacity. "Distributed generation" is electric generation that is produced at or near the point of consumption, commonly called "on-site" generation. The City's distributed energy resources include:

Point Loma Gas Utilization Facility ("GUF"), 4.6 megawatt (MW) capacity. This cogeneration facility produces both electric and thermal energy and **operates on methane gas** from sewage sludge in digestion tanks. The methane would in any case need to be flared to comply with environmental law. Rather than flaring it, this project provides for its beneficial use in two electric generating engines. The electric power is used to operate treatment processes at the sewage plant. The excess energy is sold to SDG&E under a contract bid through a CPUC Renewable Portfolio Standard process. The GUF is owned and operated by the City, and was most recently upgraded in 1997.

Point Loma Hydroelectric Facility, 1.35 MW capacity. This facility is also at the Point Loma sewage treatment plant, and it **generates hydroelectric power** from the flow of sewage effluent through the ocean outfall. It is isolated from the GUF, but similarly, its generation powers the plant, or is sold to SDG&E. The hydro facility is owned and operated by the City of San Diego.

Miramar Biosolids Center Cogeneration Facility, 10.4 MW capacity. This plant operates primarily **on landfill gas (methane) from the Miramar landfill**, but also from sewage sludge **digester gas at the Metro Biosolids Center**. The project is "privatized" and is structured on Landfill Gas and Energy Sales Agreements between the City and NEO San Diego, LLC as the "Gas Company", and between the City and Minnesota Methane San Diego, LLC as the "Cogenerator." The transaction structure allows the parties to take full advantage of federal tax credits for landfill gas projects, which in turn allows the Cogenerator

the ability to offer very low-cost electricity and heat to the City for MBC operations. The cost savings to the City for this project should exceed $30 million over the term of the agreement. Included in the benefit of the transactions is the installation and maintenance of a gas

collection system in Miramar landfill. The Cogenerator benefits from being able to sell excess electricity to SDG&E. The U.S. Navy also receives a royalty because the project is on a leasehold at MCAS Miramar. This project has been and continues to be a very successful public-private partnership.

North City Water Reclamation Plant Cogeneration Facility, 5.2 MW capacity. This project also operates on the landfill **gas from Miramar landfill**, which is piped to the North City Water Reclamation Plant. The gas is extracted by NEO SD and conveyed to the generators owned by Minnesota Methane at North City. The structure of this transaction mirrors the one at MBC. The City agreed to purchase a minimum annual volume of electricity and heat, and Minnesota Methane can sell any generation above those requirements to other parties (e.g. SDG&E). The cost of energy to the City from Minnesota Methane is far below what the cost would be if it were purchased from the utility.

Alvarado Filtration Plant Solar Project, 1.0 MW capacity. This project is presently under construction and when complete will generate up to 1 megawatt of **photovoltaic power** for use in water treatment processes at Alvarado with no emissions.

Miscellaneous Solar Projects. The City has also installed photovoltaic arrays at a number of smaller deployments, including the Ridgehaven Building, The Metro Operations Center II, Canyonside Recreation Center, North Clairemont and Oak Park libraries, and Fire Station 29. Together these represent more than 200 kW generating capacity.

2. Water Policy

In 1999, the San Diego County Grand Jury issued a report critical of San Diego's reliance on imported water. Up to 90 percent of the City's existing water supply is imported from the Colorado River and the California State Water Project. The Grand Jury recommended the development of additional local water supplies to help protect against future water shortages.

The potential for severe shortages worsened with the appellate court decision of *San Diego County Water Authority v. Metropolitan Water District of Southern California*, 117 Cal. App. 4th 13 (2004). In this case, the Court upheld a formula used by Metropolitan that limits San Diego to only 15 percent of Metropolitan's water supply in the event of a water shortage, even though San Diego currently uses 22 percent of Metropolitan's water supply. This means that if a water shortage occurs, San Diego could immediately lose almost a third of the water it receives from Metropolitan while other cities, like Los Angeles, will actually be allowed to take more water than they are using now. San Diego's petition for review by the California Supreme Court was denied.

a. Conservation

The City has ordinances that require the installation of low flow plumbing fixtures in the construction of new buildings,[60] and retrofitting of existing buildings upon change of ownership.[61]

b. Water Reuse

The City has constructed two water reclamation plants, with a combined capacity to convert 45 million gallons per day of wastewater to irrigation quality water. Unfortunately, the City is currently only using about 7 million gallons per day of recycled water. The City is investigating other opportunities to use recycled water, which are detailed in the City's Water Reuse Report. These uses included increased irrigation and industrial use, habitat restoration, and even additional treatment to produce potable quality water. The Water Reuse Report is anticipated to be discussed by the City Council in the next few months as part of the City's update of its Water Reclamation Master Plan.[62]

c. Other Sources

To the extent San Diego can diversify its sources of water, it may be able to better cope with water shortages. San Diego is currently receiving some water from the Imperial Irrigation District, realized through conservation efforts of farmers in the Imperial Valley. Other potential sources include water desalinization, as is currently being investigated in Carlsbad, and greywater irrigation, which recycles water from household sinks for residential irrigation.

3. Recycling

In 1989, the State Legislature enacted the California Integrated Waste Management Act [Act], codified at Public Resources Code sections 40000-49620. The purpose of the Act is to "reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible in an efficient and cost-effective manner to conserve water, energy, and other natural resources, to protect the environment, to improve regulation of existing solid waste landfills . . . and to specify the responsibilities of local governments to develop and implement integrated waste management programs."[63] Among other things, the Act required the City to prepare, adopt, and submit a source reduction and recycling element, along with an implementation schedule, to demonstrate how the City would divert 50 percent of all its solid waste from landfill disposal, through source reduction, recycling and composting activities by January 1, 2000.[64]

The City of San Diego's solid waste diversion rate reached 52 percent in 2004, the most recent year for which State statistics are available. The following are among the many programs implemented by the City's Environmental Services Department (ESD) to increase recycling and reuse, to encourage waste reduction, and to protect the environment.

To begin with, ESD provides curbside recycling of residential recyclables City-wide to residents and small businesses. Curbside greenery recycling is provided to over 200,000 City households. Moreover, ESD provides periodic Community Cleanups which are designed to help San Diegans dispose of or recycle bulky items which don't fit in the City's recycling or refuse collection containers. Since 1992, ESD also has operated recycling stations at Park and Recreation Centers throughout the City. These 44 recycling locations offer residents who are not able to participate in the City's curbside recycling program an opportunity to recycle and support the recreation centers at the same time. In addition, ESD has conducted many Auto Product Recycling Events around the City to which residents are encouraged to bring their used or leftover auto products for proper disposal and recycling.

Since 2001, the City has operated a Recycling Center at the City's Miramar Landfill, through its contractor, Allan Company. The Center accepts paper, cardboard, beverage containers, scrap metal, CRT devices such as computer monitors and TVs, appliances, and electronics. It serves over 90,000 customers per year. Greenery recycling is provided at the Miramar Landfill Greenery for the recycling of yard trimmings and clean wood scraps into compost, mulch, and wood chips. The City, through its contractor, Clean Harbors, also operates a Household Hazardous Waste Transfer Facility at the Miramar Landfill, which accepts household hazardous wastes such as paints, solvents, varnishes, acids, flammables, acrylics, resins, motor oil, gasoline, and other hazardous wastes used in the routine maintenance of homes, yards, or vehicles, as well as Universal waste including consumer batteries, light bulbs, light tubes, and mercury containing items, for proper disposal.

In 2002, the City's Miramar Landfill became the first municipally operated landfill in the nation to earn the internationally accepted ISO 14001 certification for its Environmental Management System, which is a set of management processes and procedures that allow an organization to analyze, manage, and reduce the environmental impact of its activities, products, and services and operate with greater efficiency and control. Moreover, methane gas produced by the decomposition of solid waste at the Miramar Landfill is used as an energy source, through a contract with a private contractor to collect, manage, and convert methane gas to electricity.

The City's refuse collection fleet was the first in the State to convert to cleaner-burning Liquefied Natural Gas (LNG). Compared to conventional vehicle fuels, LNG reduces net carbon dioxide emissions, particulates, and oxides of nitrogen emissions.

ESD continues to provide public education and outreach to educate and encourage the public and businesses to recycle via its *Recycle or Else* billboard campaign. In addition, each year since 1998 ESD has hosted "EnviroSchool," a fun and educational workshop that teaches school-age children to care for the environment. Moreover, the Department's website provides a wide variety of information on recycling opportunities and resources.

ESD collaborated with the Purchasing and Contracting Department to develop a framework for environmentally preferable purchasing practices within the City. This

framework attempts to balance multiple environmental attributes with price and performance considerations. This program was implemented on a pilot basis in July 2005.

In 2005, the San Diego City Council adopted the Construction and Demolition Debris Diversion Deposit Program ordinance which provides for the diversion of construction and demolition debris (C&D) from the Miramar Landfill to a certified C&D recycling facility. ESD is currently moving forward with a proposed contract for the design, construction, and operation of a mixed construction and demolition recycling facility at the Miramar Landfill. Currently, ESD is also evaluating other potential mandatory recycling ordinances.

Finally, ESD is in the process of developing a Long-Term Waste Management Options Strategic Plan, for all solid waste generated within the City of San Diego. The goal is to develop and implement activities, programs, facilities, and technologies that will provide sustainability, resource conservation, source reduction, recycling, diversion, disposal options, and ensure public health and environmental protection, as well as extend the life of the Miramar Landfill.

4. Energy

San Diego has established financial incentives and tax breaks for clean energy and increased energy efficiency measures. For example, the Tax Exempt Customer Incentive Program (TEC) is administered by the San Diego Regional Energy Office under the SDG&E Energy Savings Bid Program. The TEC program provides technical and administrative help combined with financial incentives to help tax-exempt organizations overcome barriers to implementing energy efficiency measures. The program offers energy audits, energy efficiency education, and technical assistance at no charge in addition to financial and purchasing incentives to qualifying organizations.[65] In addition, the San Diego Regional Energy Office administers a program to SDG&E customers called the Self Generation Incentive Program (SGIP) which gives anywhere from $1.00 to $4.50 in incentives depending on the type of equipment installed, for customers who install up to 5.0 MW of "clean" distributed generation equipment onsite.[66]

5. San Diego Cool Communities Shade Tree Program

The San Diego Cool Communities Shade Tree Program is funded by the electric and gas public goods surcharge (PGC). It works through San Diego community and volunteer based organizations and educates residential and small business customers about the energy saving benefits of trees. It also organizes community tree planting efforts in planting groups of 25 or more with the goal of planting 15,000 trees over the next 18 months. The trees are chosen for their specific varieties to ensure maximum energy savings and to be in accord with the vegetation management guidelines. The trees planted absorb GHGs, acting as sinks, and reduce GHG emissions such as carbon dioxide, nitrogen oxides, and sulfur oxides. In addition, the benefits of the program include reduction of energy consumption by providing shading and cooling in hot summer months; reducing wind velocity and infiltration of outside air into climate

controlled inside areas; providing shade for lawns thereby decreasing water usage; cooling the air by a process called evapotranspiration; preventing erosion and storm drain run off; providing wildlife habitat; and increasing overall property values by as much as 15 percent.

6. San Diego Council Policies

a. Council Policy 900-02

Adopted in 1976 and amended in 2001, Council Policy 900-02 establishes broad energy conservation policies for City operations and City regulated activities including: requiring the purchase of "Energy Star" labeled products for City facilities; implementing energy conservation techniques in the construction, maintenance, and operation of public facilities; requiring City-owned vehicles to be used and maintained to insure maximum energy conservation; reducing the demand on the energy grid and enhancing energy reliability and independence for City facilities by pursuing non-depleting energy sources; implementing the budget so as to promote energy efficiency; maximizing off-peak use of gas and electricity; fostering urban development in ways to minimize vehicular travel; developing transit, car-pool, non-motorized and traffic signal coordination programs; updating the Building Code in accordance with the most current energy conservation techniques; and requiring master plans for redevelopment areas that combine urban design, land use, and energy delivery elements with optimal long-term results in utility, beauty, and energy conservation. This policy also supports State and Federal legislation to conserve energy, and encourages conservation by citizens and private sector businesses.

b. Council Policy 900-14

Adopted in 1997 and amended in 2001 and 2003, Council Policy 900-14 is referred to as the "Green Building Policy." It sets forth the City's commitment to green building practices (meaning those reducing GHG gas emissions) in City facilities, and also promotes such practices in the private sector through education and incentives.

c. Council Policy 900-18

Adopted in 1991, Council Policy 900-18 requires all energy consuming equipment purchased by the City to meet "Energy Star" specifications or other criteria placing the products into the upper 25 percent of energy efficiency. It also requires educating City employees on energy conservation practices.

7. San Diego Region Green Action Program

The GREEN ACTION Program reaches out to local high school students to teach them the importance of energy conservation and impacts of GHG emissions. The GREEN ACTION Program will expand the current "Green Schools" Program to invite the County of San Diego and the cities of Chula Vista, Oceanside, Escondido, and Carlsbad to participate. Program objectives include (1) educating and empowering high school students, (2) designing and producing a youth forum, (3) designing and presenting "train-

the-trainer" workshops to cultivate green action program leaders and (4) designing and conducting a public survey.[67]

8. San Diego's Sustainable Community Program

In 2002, the San Diego City Council approved Resolution R-2002-895, creating the "San Diego Sustainable Community Program," which authorized the City's participation in the Cities for Climate Change program coordinated by the International Council of Local Environmental Initiatives (ICLEI). The Council set a goal of achieving a community-wide 15 percent reduction in GHG gas emissions, from 1990 levels, by 2010. The following year, the Council reconstituted the former "Energy Advisory Board" as the "Sustainable Energy Advisory Board."

9. San Diego Climate Protection Action Plan 2005

The San Diego Climate Protection Action Plan (CPAP) was developed by the San Diego Environmental Services Department in July of 2005. The CPAP builds on the measures contained in the Sustainable Community Program, and delineates a plan for slowing climate change in four steps.[68] The first two steps are taken directly from the Sustainable Community Program itself. First, the plan calls for an understanding of the current situation using a study of the GHG emissions from the year 1990, which revealed a baseline level of 15,547,000 tons of GHG emissions per year. Second, the plan established a goal for reduction of those emissions, which was set at 15 percent below the 1990 levels by the year 2010 (reducing the emissions per year to 13,215,000 tons). Third, the plan allowed for recommendations made by the Ad Hoc Advisory Committee to establish specific actions to achieve the 15 percent reduction target. Finally, the plan called for indicators to measure the progress toward the goal.

The CPAP is a great start because it sets forth actions that are already being taken by the City of San Diego and establishes new approaches that are to be considered by the City in order to meet the 15 percent target of emission reduction below 1990 levels. Specifically, the plan states that the City shall consider strategies related to Transportation, Energy, Waste, the Urban Heat Island, and Environmentally Preferable Purchasing. In the transportation category, the City is to consider development of a Community Fuel Reduction and Efficiency Policy in which vehicle fleets in City departments might reduce fuel consumption by 5 percent from 2005 levels. Also, the City would provide incentives and education about the use of Super Ultra Low Emission Vehicles. As for energy, the CPAP considers, among other things, rebates, incentives, education/outreach, technical assistance, energy audits, the use of landfill gas for energy, and the implementation of the 50 MW Renewable Energy Goal for City Operations by 2013. In the waste arena, the focus is on diversion of solid waste from the landfill through expanded waste minimization efforts and implementation of the Construction and Demolition Debris and Diversion Deposit Ordinance. The Urban Heat Island effect, caused by the abundance of dark, hard surfaces combined with the loss of trees and vegetation in the City, causing heat to be concentrated in areas, could be reduced by adopting policies, planting shade trees and using alternative roofing materials. Finally, Environmentally Preferable Purchasing is to be considered, by which the City would buy products from companies

based on the companies social and environmental performance in addition to its economic performance. The City began implementing an "Environmentally Preferable Purchasing Policy" on a pilot basis on July 1, 2005.

These efforts are extensive and will likely result in significant impacts. In fact, the City can be proud of its leadership on these issues to this point. At the same time, many other communities are deeply engaged in the process, and San Diego can draw much from their efforts. While it is a beginning, the City must do more. This Interim Report attempts to explore some of the many additional options that are available to us under the law.

III. SAN DIEGO'S CALL TO ACTION--A LOCAL PLAN OF ACTION

A. Policy Based Efforts

As highlighted above, to confront this problem head-on, hundreds of municipal governments worldwide have adopted climate-change mitigation goals. Together, these communities represent more than seven percent of global GHG gas emissions. While the actions of any single municipality can impact only a small fraction of emissions worldwide, this collaboration of a large number of urban areas can achieve meaningful reductions.[69]

Opponents or skeptics might argue that any initial steps at the local level would be too small, without merit or consequence. This may seem so in the beginning, but a first step is still a step in the right direction. Any GHG reduction goals developed by the City of San Diego would only be the start. Reducing emissions will slow the accumulation of GHGs, but the atmospheric concentration of those gases will continue to rise. To stabilize atmospheric levels of GHGs may require a reduction in emissions of 60 to 70 percent from 1990 levels.[70]

B. A Call for Expansion of City's Climate Protection Action Plan

Efforts, like the development of Local Action Plans or Goals, at the municipal level (at the City level) achieve many objectives including quantifiable reductions in emissions and the objective of better informing community leaders and decision makers about the causes and expected impacts of climate change. Local government can meaningfully reduce GHG gas emissions only by engaging our many partners in the community.[71] The most important partners of all are the people of the City and County of San Diego.

Each of us can make a difference--we are empowered and can change our patterns of energy usage through things like conservation and purchase of efficient household appliances. A typical four-person household generates approximately 15,000 pounds of carbon dioxide per year through the common patterns of energy use for lighting, washing and drying clothes, powering the refrigerator, maintaining the hot water heater, cooking, watching television, and necessary vehicular travel.[72] Easy ways to reduce these costs include weatherizing your home and upgrading to the energy efficient Energy Star model appliances, which can save a household up to 20 percent more than standard models.[73]

You may also consider walking or biking to work or school, or taking public transport, where available.

Vehicle emissions have historically caused the bulk of the San Diego's emissions, but this is changing.[74] Emissions from the energy sector will have more than doubled, according to projections, from 1990 to 2010, while vehicle and waste emissions are also projected to increase, but by comparatively modest amounts. For this reason, if San Diego is to meet its goals of reducing emissions by 15 percent from 1990 levels, major improvements will have to be made in how much energy we consume, and in how we produce the energy that we do consume. Every reduction in GHG gas emissions makes a difference, and the people of San Diego can have the greatest impact of all on our community's contribution to combating climate change.

C. Local Action Plan Components

Continuing local efforts to effectively enhance and implement our Climate Protection Plan will require considerable efforts by the City, County, other governments, the commercial, industrial, and transportation sectors, and individual residents. The City of San Diego cannot and should not do this alone.[75]

Attached to this report is the Local Action Plan on Global Warming developed and used by the City of Portland & Multnomah County. It is provided simply as a means to show how very possible it is. The template is not intended to be a final and complete model for what San Diego needs--it is evidence of an opportunity for expansion of our own Climate Protection Action Plan.[76]

It identifies five primary components with an opportunity to identify specific GHG gas reduction targets, and a sixth (Policy, Research, and Education) element that will enhance the success of the other five strategies but is not credited directly with quantifiable reductions.

- Providing **policy, research, and community-wide education** will enhance all of the following efforts.
- Energy-efficiency initiatives
- **Transportation reductions** can be achieved by reducing per capita vehicle miles traveled and by improving the average fuel efficiency of vehicles.
- Meeting all growth in local electricity load with **renewable energy resources** will reduce GHG gas emissions.
- **Reducing solid waste and improving recycling** and recovery rates and practices will reduce methane emissions from landfills and the energy required in manufacturing processes.

- Promoting expanded and improved **forestry** and seeking other carbon offsets.

D. A Public Process

Climate change affects us all. Therefore, for ultimate success, it is recommended that our continuing efforts be the result of collaboration among members of the public, businesses, non-profit organizations, utilities, state, federal, City and County agencies. This could involve future planned meetings with stakeholders and opportunities for public comment and public hearings on any changes to the Climate Protection Action Plan (CPAP).[77]

E. A Look at Success

Whether or not our CPAP, or its amendment, is successful will also depend on effective monitoring. Such a plan could include monitoring by the City of San Diego and the County of San Diego to verify the success of efforts (e.g., inventorying GHG gas emissions annually and preparing a report every two years on our progress in implementing the plan). The progress report could include data on local energy use, renewable power purchases, solid waste disposal and recycling rates, and tree-planting efforts. The progress report could also identify additional actions from the plan to pursue over the following years. By keeping the community informed of our progress, we can sustain the City's and the County's commitment to doing our part to address climate change.[78]

---

[1] City *of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006)*; Progress on Incorporating Climate Change into Management of California's Water Resources*, page 1-1, Technical Memorandum Report by the California Department of Water Resources (July 2006);
California Energy Commission *1997 Global Climate Change, Greenhouse Gas Emissions Reduction Strategies for California Vol. 1* (January 1998);
California Climate Action Registry accessible at file://C:\DOCUME~1\seg\LOCALS~1\Temp\N6KVK7G7.htm (last visited Aug. 26, 2006);
California Climate Action Team, *Fact Sheet , California Climate Activities*, accessible at www.cliamtechange.ca.gov (last visited Aug. 26, 2006);
Office of the Governor, State of California, *Gov. Schwarzenegger Announces Climate Action Series to Present Greenhouse Gas Reduction Strategy* (April 4, 2006) *available at* http://www.governor.ca.gov/state/govsite/gov_htmlprint.jsp?BV_SessionID=@@@@122... (last visited Aug. 26, 2006);
Anthony Westerling and Benjamin Bryant, *Climate Change and Wildfire in and Around California: Fire Modeling and Loss Modeling*, A Report From the California Climate Change Center (February 2006);
Josue Medellin, Julien Harou, et al, *Climate Warming and Water Supply Management in California*, *A Report From California Climate Change Center* (March 2006);
Cap and Trade Subgroup Climate Action Team, *Cap and Trade Program Design Options Report of the Cap and Trade Subgroup of the climate Action Team* (March 27, 2006);
Jeremy S. Fried, J. Keith Gilless, et al, *Predicting the Effect of Climate Change on Wildfire Severity and Outcomes in California: Preliminary Analysis, A Report from the California Climate Change Center* (March 2006);

Dennis Baldocchi and Simon Wong, *An Assessment of the Impacts of Future CO2 and Climate on Californian Agriculture, A Report From the California Climate Change Center* (March 2006);
California Department of Water Resources, *Progress on Incorporating Climate Change into Management of California's Water Resources, Technical Memorandum Report* (July 2006);
Juliet Eilperin, *22 Cities Join Clinton Anti-Warming Effort*, Washingtonpost.com A03 (August 2, 2006) at http://www.washintonpost.com/wp-dyn/content/article/2006/08/01/AR2006080101327.htm;
Juliet Eilperin, *Cities, States Aren't Waiting For U.S. Action on Climate*, Washingtonpost.com A01 (August 11, 2006) *at* http://www.washingtonpost.com/wp-dyn/content/article/2006/08/10/AR2006081001492.htm;
ICLEI Local Governments for Sustainability *at* http://www.iclei.org;
http://www.summits.ncat.org/step4.php (last visited Aug. 26, 2006); US Mayors Climate Protection Agreement *at* http://www.seattle.gov/mayor/climate/quotes.htm (last visited at Aug. 26, 2006);
U.S. Environmental Protection Agency Global Warming Actions *at* http://yosemite.epa.gov/oar\globalwarming.nsf/content/ActionsStateActionPlans.html (last visited at Aug. 23, 2006);
City of Portland Local Action Plan on Global Warming at http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006);
City of Portland, County of Multnomah, Oregon, *Global Warming Progress Report, A Progress Report on the City of Portland and Multnomah County Local Action Plan on Global Warming* (June 2005) *available at* http://www.sustabinableportland.org; City of Portland, County of Multnomah, Oregon, *Local Action Plan on Global Warming* (April 2001) *available at* http://www.sustainableportland.org;
State of California Climate Action Team, *State of California's Actions to Address Global Climate Change* (2005) http://www.climatechange.ca.gov/climate_action_team/reports/2005-12-08_STATE_ACTIONS_REPORT.pdf; *California Launches Biggest Energy Efficiency Program in History,* Environmentallawyers.com *accessed at* http://www.environmentallawyers.com/regional-content.cfm/state/CA/Article/36871.California (last visited at Aug. 26, 2006);
California Passes Bill to Promote Clean Cars and Renewables Environmentallawyers.com *accessed at* http://www.environmentallawyers.com/regional-content.cfm/state/CA/Article/4071/California (last visited at Aug. 26, 2006);
Union of Concerned Scientists *California Regulates Global Warming Emissions from Motor Vehicles accessed at* http://www.ucsusa.org/clean_vehicles/vehicles_health/californias-global-warming-vehicle- (last visited Aug. 26, 2006);
Andrew C. Revkin, *Eskimos Seek to Recast Global Warming as a Rights Issue*, The New York Times (December 15, 2004) *available at* http://www.nytimes.com/2004/12/15/international/americas/15climate.html?%2338;ei=50... (last visited Aug. 26, 2006).

[2] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006)

[3] *Progress on Incorporating Climate Change into Management of California's Water Resources*, page 1-1, Technical Memorandum Report by the California Department of Water Resources (July 2006).

[4] IPCC Second Assessment: Climate Change 1995. URL: *www.ipcc.ch*.; Third Assessment of Working Group I of the Intergovernmental Panel on Climate Change, 2001. URL: www.ipcc.ch; *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006); *California Environmental Protection Agency Climate Action Team Report to Arnold Schwarzenegger and the Legislature*, California Climate Action Team (March 2006).

[5] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006)

[6] Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-1998. U.S. Environmental Protection Agency, 2000.

[7] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006)

[8] *The Regional Impacts of Climate Change: An Assessment of Vulnerability.* Intergovernmental Panel on Climate Change. 1997. URL: http://www.ipcc.ch/pub/sr97.htm

[9] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006)

[10] San Francisco Department of the Environment and Public Utilities Commission, *Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions*, p. 1-4 (Sept. 2004).
[11] See *CCP Report of City of Santa Rosa*, p. 3.
[12] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006)
[13] *IPCC Second Assessment: Climate Change 1995.* Intergovernmental Panel on Climate Change, 1995. URL: www.ipcc.ch.
[14] City of Portland & Multnomah County Local Action Plan on Global Warming April 2001 as the source of the following data.
[15] *Climate Action Plant for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions*, San Francisco Department of the Environment and Public Utilities Commission, September 2004, p. 1-6.
[16] San Diego Regional Energy Office, "California Sets Record for Electricity Demand," available at http://www.sdenergy.com/NewsDetail.asp?ID=63&ContentID=42
[17] California Independent System Operator New Release, *Conservation Needed, High Power Demand Expected as Heat Wave Continues* (July 25, 2006); San Diego Regional Energy Office, "California Sets Record for Electricity Demand," available at http://www.sdenergy.com/NewsDetail.asp?ID=63&ContentID=42
[18] San Diego Regional Energy Office, "California Sets Record for Electricity Demand," available at http://www.sdenergy.com/NewsDetail.asp?ID=63&ContentID=42
[19] Cited in *Climate Action Plant for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions*, San Francisco Department of the Environment and Public Utilities Commission, September 2004, p. 1-9.
[20] San Diego Environmental Services Department, *Climate Protection Action Plan* (July 2005) p. 13.
[21] Ecological Society of America, Confronting Climate Change in California.
[22] San Diego Environmental Services Department, *Climate Protection Action Plan* (July 2005) p. 13.
[23] Technical Report, pgs.2-3 through 2-5.
[24] San Francisco Climate Action Plan graphic chart
[25] Technical Report, p. 2-8.
[26] CCP Report, City of Santa Rosa, p. 4.
[27] Kyoto Protocol available at http://unfccc.int/resource/docs/convkp/kpeng.html.
[28] Juliet Eilperin, *Cities, States Aren't Waiting For U.S. Action on Climate*, Washingtonpost.com A01 (August 11, 2006) *at* http://www.washingtonpost.com/wp-dyn/content/article/2006/08/10/AR2006081001492.htm; Juliet Eilperin, *22 Cities Join Clinton Anti-Warming Effort*, Washingtonpost.com A03 (August 2, 2006) at http://www.washintonpost.com/wp-dyn/content/article/2006/08/01/AR2006080101327.htm
[29] ICLEI Local Governments for Sustainability *at* http://www.iclei.org; http://www.summits.ncat.org/step4.php (last modified Aug. 26, 2006)
[30] *Friends of the Earth et al. v. Overseas Private Investment Corporation et al*. 02-4106 (N.D. Cal., filed Aug. 27, 2002);
See Friends of the Earth, Greenpeace, Global Warming: Media Kit: Most Recent Update, available at http://www.climatelawsuit.org/index.htm (last visited Aug. 28, 2006).
[31] *State of Connecticut, et. al. v. American Electric Power Co., Inc*., No.04-5669 (S.D.N.Y.), appeal docketed, No. 05-5104 (2nd Cir. 2005);
See Office of the Attorney General, Attorney General Lockyear Files Lawsuit to Reduce Global Warming Emissions from Five Largest Polluters: California Joins Seven Other States, New York City In Groundbreaking Action, available at https://ag.ca.gov/newalerts/release.php?id+712 (July 21, 2004);
Reuters New Service, *Eight States and New York City Appeal Global Warming Dismissal*, available at http://www.planetark.org/dailynewsstory.cfm/newsid/33077/story.htm. (Oct. 20, 2005).
[32] *Center for Biological Diversity, et al. v. United States Secretary of the Interior*, No. 05-5191 (N. D. Cal., filed December 15, 2005);
See Center for Biological Diversity, Endangered Species Act Listing Process Underway, available at http://www.sw-center.org/swcdb/SPECIES/polarbear/index.html (last visited Aug. 28, 2006).
[33] *Massachusetts et. al. v. United States Environmental Protection Agency,* 415 F.3d (D.C. Cir. 2005*), cert. granted*, (U.S. June 26, 2006) (No. 05-1120);
See CBS Associated Press, *Court to Hear Global Warming Case*, available at http:www.cbsnews.com/stories/2006/06/26/supremecourt/ (June 26, 2006);

Sierra Club, Sierra Club Lawsuits: Supreme Court to Hear Pivotal Global Warming Case, available at http://www.sierraclub.org/environmentallaw/lawsuits/viewCase.asp?id=316 (last visited Aug. 28, 2006).

[34] *State of New York, et al. v. United States Environmental Protection Agency*, No. 06-___ (D.C. Cir., filed April 27, 2006);
See Office of New York State Attorney General Eliot Sptizer, States Sue EPA for Violating Clean Air Act and Refusing to Act on Global Warming, available at http://www.oag.state.ny.us/press/2006/apr/apr27a_06.html (April 27, 2006).

[35] *Natural Resources Defense Council, et al. v. Reclamation Bd. of the Resources Agency of California*, No. 06CS01228 (Sacramento Superior Court, filed August 18, 2006.);
See Weiser, Matt, Levee Suit Cites Global Warming: Officials Who Ok'd Delta Homes Illegally Failed To Consider Sea Level Rise, Groups Say, available at http://www.sacbee.com/content/news/environment/v-print/story/14300483p-15165294c.html (Aug. 18, 2006).

[36] *Northwest Environmental Defense Center, et al. v. Owens Corning Corp.*, No. 04-CV-1727-JE (D. Or. 2004);
See Sierra Club, Sierra Club Lawsuits: Plans for Insulation Plan in Oregon Abandoned; Global Warming Gases at Issue in Lawsuits, available at http://www.sierraclub.org/environmentallaw/lawsuits/viewCase.asp?id=313 (last visited August 26, 2006).

[37] *Center for Biological Diversity et al. v. United States Department of Energy, et al.*, 419 F.Supp.2d 1166 (N.D. Cal. 2006);
See Center for Biological Diversity, Court Rules Bush Administration Violating Law Designed to Reduce Dependence on Foreign Oil, Global Warming, and Air Pollution: Alternative Fuels Vehicles to Receive Boost, available at http://www.biologicaldiversity.org/swcbd/PRESS/epact3-07-06.html (March 7, 2006).

[38] *US Mayors Climate Protection Agreement at* http://www.seattle.gov/mayor/climate/quotes.htm (last visited at Aug. 26, 2006).

[39] *US Mayors Climate Protection Agreement at* http://www.seattle.gov/mayor/climate/quotes.htm (last visited at Aug. 26, 2006).

[40] *U.S. Environmental Protection Agency Global Warming Actions at* http://yosemite.epa.gov/oar\globalwarming.nsf/content/ActionsStateActionPlans.html (last visited at Aug. 23, 2006).

[41] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006);
City of Portland, County of Multnomah, Oregon, *Global Warming Progress Report, A Progress Report on the City of Portland and Multnomah County Local Action Plan on Global Warming* (June 2005) *available at* http://www.sustabinableportland.org;
City of Portland, County of Multnomah, Oregon, *Local Action Plan on Global Warming* (April 2001) *available at* http://www.sustainableportland.org.

[42] Michael Gardner, *State Moves to enact Greenhouse Gas Curbs*, (August 31, 2006) SignOnSanDiego.com, available at http://signonsandiego.printthis.clickability.com/pt/cpt?action=cpt&title=SignOnSanDiego.... (last visited on Aug. 31, 2006);

[43] Michael Gardner, *State Moves to enact Greenhouse Gas Curbs*, (August 31, 2006) SignOnSanDiego.com, available at http://signonsandiego.printthis.clickability.com/pt/cpt?action=cpt&title=SignOnSanDiego.... (last visited on Aug. 31, 2006);

[44] Mooney, Chris, *The Courthouse Effect*, *available at* http://www.slate.com/toolbar.aspx?action=print&id=2119312 (May 23, 2005).

[45] U.S. Department of Energy, *California Approves Legislation for Million Solar Roofs*, Energy Efficiency and Renewable Energy Network News, available at http://www.eere.energy.gov/news/news_detail.cfm/news_id=10210 (Aug. 23, 2006).

[46] State of California Climate Action Team, *State of California's Actions to Address Global Climate Change* (2005) http://www.climatechange.ca.gov/climate_action_team/reports/2005-12-08_STATE_ACTIONS_REPORT.pdf. (All references cited on page13-16 of this Interim Report relating to actions and policies of the state of California between the years 1997 to the present are from this source.)

[47] *California Launches Biggest Energy Efficiency Program in History*, Energy Environmentallawyers.com *accessed at* http://www.environmentallawyers.com/regional-content.cfm/state/CA/Article/36871.California (last visited at Aug. 26, 2006);
State of California Climate Action Team, *State of California's Actions to Address Global Climate Change* (2005) http://www.climatechange.ca.gov/climate_action_team/reports/2005-12-08_STATE_ACTIONS_REPORT.pdf.
[48] *California Passes Bill to Promote Clean Cars and Renewables* Environmentallawyers.com *accessed at* http://www.environmentallawyers.com/regional-content.cfm/state/CA/Article/4071/California (last visited at Aug. 26, 2006);
State of California Climate Action Team, *State of California's Actions to Address Global Climate Change* (2005) http://www.climatechange.ca.gov/climate_action_team/reports/2005-12-08_STATE_ACTIONS_REPORT.pdf.
[49] State of California Climate Action Team, *State of California's Actions to Address Global Climate Change* (2005) http://www.climatechange.ca.gov/climate_action_team/reports/2005-12-08_STATE_ACTIONS_REPORT.pdf.
[50] *California Passes Bill to Promote Clean Cars and Renewables* Environmentallawyers.com *accessed at* http://www.environmentallawyers.com/regional-content.cfm/state/CA/Article/4071/California (last visited at Aug. 26, 2006);
State of California Climate Action Team, *State of California's Actions to Address Global Climate Change* (2005) http://www.climatechange.ca.gov/climate_action_team/reports/2005-12-08_STATE_ACTIONS_REPORT.pdf.
[51] Union of Concerned Scientists *California Regulates Global Warming Emissions from Motor Vehicles accessed at* http://www.ucsusa.org/clean_vehicles/vehicles_health/californias-global-warming-vehicle- (last visited Aug. 26, 2006).
[52] State of California Climate Action Team, *State of California's Actions to Address Global Climate Change* (2005) http://www.climatechange.ca.gov/climate_action_team/reports/2005-12-08_STATE_ACTIONS_REPORT.pdf. (All references cited on page13-16 of this Interim Report relating to actions and policies of the state of California between the years 1997 to the present are from this source.)
[53] Mooney, Chris, *The Courthouse Effect*, *available at* http://www.slate.com/toolbar.aspx?action=print&id=2119312 (May 23, 2005);
Friends of the Earth et al. v. Overseas Private Investment Corporation et al. 02-4106 (N.D. Cal., filed Aug. 27, 2002);
See Friends of the Earth, Greenpeace, *Global Warming: Media Kit: Most Recent Update, available at* http://www.climatelawsuit.org/index.htm (last visited Aug. 28, 2006);
State of Connecticut, et. al. v. American Electric Power Co., Inc., No.04-5669 (S.D.N.Y.), *appeal docketed,* No. 05-5104 (2nd Cir. 2005);
See Office of the Attorney General, *Attorney General Lockyear Files Lawsuit to Reduce Global Warming Emissions from Five Largest Polluters: California Joins Seven Other States, New York City In Groundbreaking Action,* available at https://ag.ca.gov/newalerts/release.php?id+712 (July 21, 2004);
Reuters New Service, *Eight States and New York City Appeal Global Warming Dismissal, available at* http://www.planetark.org/dailynewsstory.cfm/newsid/33077/story.htm. (Oct. 20, 2005).*;*
Center for Biological Diversity, et al. v. United States Secretary of the Interior, No. 05-5191 (N. D. Cal., filed December 15, 2005);
See Center for Biological Diversity, *Endangered Species Act Listing Process Underway*, *available at* http://www.sw-center.org/swcdb/SPECIES/polarbear/index.html (last visited Aug. 28, 2006);
Massachusetts et. al. v. United States Environmental Protection Agency, 415 F.3d (D.C. Cir. 2005), *cert. granted,* (U.S. June 26, 2006) (No. 05-1120);
See CBS Associated Press, *Court to Hear Global Warming Case, available at* http:www.cbsnews.com/stories/2006/06/26/supremecourt/ (June 26, 2006);
Sierra Club, *Sierra Club Lawsuits: Supreme Court to Hear Pivotal Global Warming Case*, *available at* http://www.sierraclub.org/environmentallaw/lawsuits/viewCase.asp?id=316 (last visited Aug. 28, 2006);
State of New York, et al. v. United States Environmental Protection Agency, No. 06-___ (D.C. Cir., filed April 27, 2006);
See Office of New York State Attorney General Eliot Sptizer, *States Sue EPA for Violating Clean Air Act and Refusing to Act on Global Warming*, *available at*

http://www.oag.state.ny.us/press/2006/apr/apr27a_06.html (April 27, 2006); *Natural Resources Defense Council, et al. v. Reclamation Bd. of the Resources Agency of California*, No. 06CS01228 (Sacramento Superior Court, filed August 18, 2006.);
See Weiser, Matt, *Levee Suit Cites Global Warming: Officials Who Ok'd Delta Homes Illegally Failed To Consider Sea Level Rise, Groups Say, available at* http://www.sacbee.com/content/news/environment/v-print/story/14300483p-15165294c.html (Aug. 18, 2006);
Northwest Environmental Defense Center, et al. v. Owens Corning Corp., No. 04-CV-1727-JE (D. Or. 2004);
See Sierra Club, *Sierra Club Lawsuits: Plans for Insulation Plan in Oregon Abandoned; Global Warming Gases at Issue in Lawsuits, available at* http://www.sierraclub.org/environmentallaw/lawsuits/viewCase.asp?id=313 (last visited August 26, 2006);
Center for Biological Diversity et al. v. United States Department of Energy, et al., 419 F.Supp.2d 1166 (N.D. Cal. 2006);
See Center for Biological Diversity, *Court Rules Bush Administration Violating Law Designed to Reduce Dependence on Foreign Oil, Global Warming, and Air Pollution: Alternative Fuels Vehicles to Receive Boost, available at* http://www.biologicaldiversity.org/swcbd/PRESS/epact3-07-06.html (March 7, 2006).

[54] *City of Los Angeles Climate Action Plan Energy CAP, Adopted by the Los Angeles City Council March 2001*, Prepared by the City of Los Angeles Environmental Affairs Department in partnership with the Los Angeles Department of Water and Power and the international Council for Local Environmental initiatives.

[55] *City of Los Angeles Climate Action Plan Energy CAP, Adopted by the Los Angeles City Council March 2001*, Prepared by the City of Los Angeles Environmental Affairs Department in partnership with the Los Angeles Department of Water and Power and the international Council for Local Environmental initiatives.

[56] See *CCP Report of City of Santa Rosa: Milestone One GHG Inventory.*

[57] *Climate Action Plant for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions*, San Francisco Department of the Environment and Public Utilities Commission, September 2004.

[58] *California Action Registry*, *available at* file://C:\DOCUME~1\seg\LOCALS~1\Temp\N6KVK7G7.htm (last visited Aug. 26, 2006).

[59] California Climate Action Team, *Fact Sheet , California Climate Activities*, accessible at www.cliamtechange.ca.gov (last visited Aug. 26, 2006).

[60] San Diego Municipal Code §§ 147.0301 et seq.

[61] San Diego Municipal Code §§ 147.0401 et seq.

[62] Water Reuse Study *available at* http://www.sandiego.gov/water/waterreusestudy/index.html (last visited at Aug. 28, 2006).

[63] Cal. Pub. Res. Code § 40052.

[64] Cal. Pub. Res. Code §§ 41000, 41770(a), 41780(a)(2), 41822.

[65] http://www.sdenergy.com/ContentPage.asp?ContentID=328&Section ID=325

[66] http://www.sdenergy.com/ContnetPage.asp?ContentID=35&SectionID=24

[67] Program Implementation Plan, San Diego Region GREEN ACTION Program (March 12, 2004). Submitted by San Diego Regional Energy Partnership Pages 3 - 7.

[68] P. Lamont Ewell, City Manager; Richard Mendes, Deputy City Manager;
Elmer L. Heap. Jr., ESD Dept. Director; and Chris Gonaver, ESD Assistant Director, *City of San Diego Climate Protection Action Plan*, City of San Diego Environmental Services Department *available at* http://www.sandigo.gov/environmental-services/sustainable/climate.shtml (July 2005).

[69] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006).

[70] Houghton, T.M., C.E. Jenkins, and J.J. Ephramus, eds. *Climate Change: The IPCC Scientific Assessment* Intergovernmental Panel on Climate Change, Cambridge University Press, 1990.

[71] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006)

[72] National Centre for Climate-Energy Solutions, Residential Carbon Dioxide Calculator, available at http://www.niwascience.co.nz/ncces/co2calc/, visited August 28, 2006.

[73] *Climate Action Plant for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions*, San Francisco Department of the Environment and Public Utilities Commission, September 2004, p. 3-20.

[74] . *Ref: City of San Diego, Department of Environmental Services, Climate Protection Action Plan – Executive Summary (2005), p. 8.*

[75] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006)
[76] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006)
[77] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006)
[78] *City of Portland Local Action Plan on Global Warming at* http://www.portlandonline.com/auditor/index.cfm?a=cfaej&c=cjbfb (last visited on Aug. 23, 2006).